

NATIONAL INSTITUTES OF HEALTH
FISCAL YEAR 2003
PLAN FOR HIV-RELATED RESEARCH

VI: BEHAVIORAL AND
SOCIAL SCIENCE

PREPARED BY THE OFFICE OF AIDS RESEARCH

AREA OF EMPHASIS:**Behavioral and Social Science****SCIENTIFIC ISSUES**

At present, the most effective way to prevent or reduce the spread of HIV/AIDS is through behavioral change. The majority of AIDS cases in the United States and globally result from two activities: unprotected sexual intercourse with an HIV-infected person and the use of HIV-contaminated injection drug equipment. The primary goal of NIH-sponsored AIDS-related behavioral and social science research is to discover how to change the behaviors that lead to HIV transmission—including preventing their initiation—and how to maintain protective behaviors once they are adopted. An additional goal is to reduce the negative impact of HIV on individuals with HIV infection, their families, the health care system, and society. Three themes crosscut, and are implicit in, priority areas in AIDS-related behavioral and social science: addressing both HIV-infected and HIV-uninfected persons; conducting science relevant and appropriate for both domestic and international settings; and examining HIV risk, protection, and impact across the lifecourse.

**UNDERSTANDING
AND INTERVENING
IN HIV
TRANSMISSION**

Current research priorities in the behavioral and social sciences reflect a number of recent and significant developments. First, there has been a notable shift in the demographics of the HIV/AIDS epidemic in the United States over the past decade. A rising proportion of new HIV and AIDS diagnoses are occurring among women, racial/ethnic minorities (principally African American and Latino/Hispanic), young adults, and people older than 50 years of age; and increasingly, HIV is transmitted through sexual contact in the context of drug and alcohol use. These changes require the

development and refinement of behavioral and social interventions that take into account the complex interplay of gender, age, cultural context, and HIV risk. It is important to improve knowledge about how cultural beliefs and institutional arrangements contribute to access to and utilization of prevention and care services, and the relative effectiveness of individual, behavioral-change interventions and community-based prevention strategies.

PRIORITIES FOR FUTURE RESEARCH:

- **Better understand and address the psychological, social, economic, and cultural dynamics of gender and sexuality (including the impact of abuse, sexual development, gender norms and identity, sexual orientation, and gender inequality) that play a role in promoting sexual health or conferring sexual risk related to HIV transmission.**
- **Understand and address the disparate risks and consequences of HIV infection, as well as access, utilization, and quality of prevention and health care services among individuals and groups differing by socioeconomic status, geographic location, gender, sexual orientation, age, and ethnicity.**
- **Investigate changing patterns, contexts, and kinds of substance use (injection and other forms of drug use and routes of transmission, and alcohol use) and their implications for HIV transmission, with an emphasis on associated sexual risk-taking behaviors.**

Second, the development of new and more effective drug therapies—in particular, combination therapies—for combating HIV infection has raised a host of behavioral questions that have significant implications for HIV prevention and treatment. With combination therapies, the number of drugs and frequency of dosing require strict adherence to regimens that may be difficult for many people to achieve. Lack of complete adherence may result in the development of resistant strains of HIV, which could have devastating effects on our ability to stem transmission and treat HIV-infected individuals. In addition, as HIV-infected individuals experience improved health and a decline in detectable virus in their bodies as a result of taking the new combination therapies, they may believe they are less infectious and may lapse into unsafe sexual and drug-using behaviors. This could have the effect of increasing HIV transmission, if the virus is still viable at undetectable levels. These issues highlight the importance of research on how best to ensure adherence to both pharmacological and behavioral HIV-related interventions, as well as research on the sustainability of HIV prevention efforts over time. It is essential to improve knowledge about

how best to provide individual and community support for primary prevention efforts among HIV-infected individuals, and to ensure societal commitment to HIV prevention for the duration of the epidemic.

PRIORITY FOR FUTURE RESEARCH:

- **Identify and address issues related to the initiation, sustainability, and renewal of HIV/AIDS risk reduction efforts at the individual, dyadic, group, and community levels over time, including changing perceptions and risk behaviors associated with the development of new HIV treatments, services, and prevention technologies.**

A third important development is the recognition that large-scale HIV prevention strategies adopted by national and local Governments have been effective in reducing transmission in a number of countries and cities. Policy changes related to promoting access to and utilization of known HIV prevention measures, including condoms, sterile injection equipment, and delaying or abstaining from sexual intercourse, have resulted in documented declines in HIV incidence even in settings with high seroprevalence rates. This suggests the need to study further the impact of economic, legal, and policy changes on stemming the AIDS epidemic through behavioral and social change. It also highlights the urgency of widely disseminating efficacious, science-based HIV prevention interventions for greater public health impact. In doing so, it is important to identify and address cultural, ethical, and logistical (e.g., infrastructure-building, cost, and training) issues that arise in replicating and/or adapting interventions with different populations and in different settings.

**AMELIORATING THE
CONSEQUENCES OF
HIV INFECTION
AND AIDS**

PRIORITY FOR FUTURE RESEARCH:

- **Conduct and support operational and health services research to better understand and address barriers to, and facilitators of, the implementation of science-based HIV/AIDS interventions at the public health level.**

There has been a growing recognition that many individuals who become HIV infected also have, or are vulnerable to, a host of co-morbid conditions, including other infectious diseases (e.g., hepatitis, sexually transmitted diseases [STDs], tuberculosis), substance abuse, mental illness, and homelessness. Both the risks and the consequences of HIV infection for these individuals must be evaluated and addressed in the context of these other conditions. We need studies that test the efficacy and effectiveness of interventions that simultaneously address multiple diagnoses and risks, improve HIV treatment adherence, and/or have an impact on other health outcomes among multiply-diagnosed individuals.

RESEARCH AND EVALUATION METHODOLOGIES

PRIORITY FOR FUTURE RESEARCH:

- **Support research on the social and environmental factors and contexts that contribute to the co-occurrence of HIV/AIDS, other infectious diseases (e.g., tuberculosis, STDs, hepatitis), substance use, mental illness, and homelessness; and support research on strategies for addressing such co-occurring conditions.**

Rapid advancement of meaningful and effective HIV-related behavioral and social science research requires further development of methodological tools, including those for evaluating HIV prevention interventions. As methodology represents the essential building blocks of both basic and intervention research, it must be given special attention at NIH. Current needs in the behavioral and social sciences include assessing the viability, advantages, and disadvantages of including both behavioral and biological outcomes in individual studies, and developing methods for rapid assessment and intervention in community settings.

With these recent developments and current priorities in mind, NIH will continue to sponsor research related to the following: developing, implementing, and evaluating behavioral and social interventions to reduce HIV transmission in a range of populations and settings; strengthening our understanding of the determinants, trends, and processes of HIV-related risk behaviors and the consequences of HIV infection; developing and evaluating behavioral strategies for preventing or ameliorating the negative physical, psychological, and social consequences of HIV infection; and improving the research methodologies employed in behavioral and social science research. The idea that HIV-related behavior and behavior change must be viewed within a human developmental framework cuts across these issues, as does the recognition of the role that cultural and socioeconomic factors play in diverse geographic and resource settings. Accordingly, research must address emerging issues at different points along the developmental trajectory from childhood through old age (including middle childhood, adolescence, young adulthood, and middle age) and in diverse geographic settings. Also cutting across priorities in the behavioral and social sciences is a continued commitment to fostering better linkages among researchers, communities most affected by HIV and AIDS, and organizations responsible for providing HIV prevention and health care services.

SCIENTIFIC OBJECTIVES AND STRATEGIES

OBJECTIVE:

Support research to develop, evaluate, and diffuse effective behavioral, social, environmental, and economic interventions to prevent HIV transmission and acquisition by reducing HIV-related risk behaviors and increasing protective behaviors. Interventions should address the social and cultural contexts within which risks occur (e.g., social class, gender, race, age, education, and ethnicity) and attend to ethical issues, both domestically and internationally.

STRATEGIES:

- Develop and evaluate the efficacy, effectiveness, and cost-effectiveness of demographically and culturally appropriate behavioral and social interventions in different domestic and international settings and populations to reduce high-risk HIV-related sex and drug use behaviors and HIV transmission.

Populations and Contexts

- Develop and test interventions targeted at HIV-infected persons to reduce their risky sexual and drug use behaviors.
- Support intervention research that addresses the impact of alcohol and/or drugs on sexual encounters that may contribute to HIV transmission.
- Continue development of interventions targeting at-risk populations (e.g., injecting drug users [IDUs], other drug users, partners of drug users, men who have sex with men), with particular emphasis on drug use and sex-related risks.
- Support domestic and international intervention research to enhance healthy sexual development and responsible protective behaviors (including access to and use of barrier methods, avoidance of too-early or nonconsensual sex, and abstinence from unsafe sexual behavior) throughout one's lifetime.
- Support interventions for populations that are currently low risk or that perceive themselves to be low risk for HIV infection, but that may be susceptible to engaging in high-risk behaviors (e.g., non-sexually active, non-drug-using adolescents; heterosexual men and women; and middle-aged and older populations).

- Support intervention research that identifies effective attention to contextual risk factors for groups disproportionately affected who continue to demonstrate high-risk behaviors. This research also should identify which public health applications most effectively attend to cultural contexts.
- Investigate the interaction of behavioral and pharmacologic therapies for drug and alcohol addiction and mental health disorders in those at risk of becoming HIV infected or already HIV infected.
- Develop, test, and evaluate interventions that target individuals both within prisons and returning to society from the prison system; strategies include increasing access to education, information, therapeutic care, prevention services, and clinical trials.
- Support the capacity to develop rapid-response domestic and international intervention studies.

Effectiveness

- Develop, test, and evaluate interventions that target a range or combination of levels of social organization—individual, dyad, family, network, community, institution, and society—and that examine how these levels interact to affect HIV risk and protective behavior and HIV transmission in different cultural contexts.
- Support research to increase the effectiveness, cost-effectiveness, and cost-utility of interventions for HIV-related drug abuse, mental health, alcoholism treatment, and family planning and to improve access to these treatments and interventions; such research may include the development of new pharmacotherapies and behavioral therapies to reduce HIV-related risk behavior and HIV transmission in different settings and populations.
- Support research in the United States and abroad to improve the transfer of effective HIV interventions to and from the community; support research on the adoption and adaptation of efficacious HIV interventions by communities (including studies of diffusion processes and the exchange of knowledge between service providers and researchers); this includes research on the maintenance of effective interventions as well as assessing the generalizability of interventions with diverse populations.

- Evaluate novel interventions identified as high priority by HIV community planning groups and other service providers.

Systems

- Support research that investigates the impact of laws and policies on HIV transmission.
- Support research to understand and improve the organization, financing, management, access, delivery, cost-effectiveness, and cost-utility of health care, family planning, and social services that reduce HIV risk behaviors and HIV transmission.
- Support interdisciplinary and cross-national behavioral research.
- Support research to understand and improve linkage, coordination, and integration among primary medical care; drug, alcohol, and mental health treatment; STD treatment; reproductive health and family planning services; social services; and community-based HIV prevention services.
- Support research to integrate HIV risk-reduction goals and assessments into existing models of drug abuse treatment (e.g., methadone maintenance, outpatient drug-free, inpatient, and therapeutic community treatment programs).
- Support intervention research on strategies for changing the willingness of communities to support and adopt primary prevention interventions.

Methods

- Design and test behavioral interventions to increase recruitment, retention, and adherence to protocols for HIV prevention research, including trials for prophylactic vaccines, microbicides, and other biomedical prevention methods.
- Encourage, where appropriate, the use of quasi-experimental designs and the evaluation of natural experiments in domestic and international HIV preventive intervention research.
- Support behavioral intervention studies that include HIV seroincidence data and other biologic markers as outcome measures.

	<p>OBJECTIVE:</p> <p>Support basic social and behavioral research to strengthen understanding of the determinants, processes, and cultural and contextual issues influencing HIV-related risk and protective behaviors and the consequences and impact of HIV disease, including treatment for and management of HIV infection. This includes domestic and international research that examines the societal, community, organizational, social network, dyadic, and individual barriers and facilitators to the adoption and utilization of effective preventive and treatment interventions across the life course.</p>
<p>STRATEGIES:</p>	<p>Emerging Priorities</p> <ul style="list-style-type: none"> • Conduct basic research to better understand the impact of HIV therapeutic regimens on adherence, sexual risk behaviors, drug-related risk behaviors, and psychosocial adaptation (i.e., people feeling better and healthier). • Develop new models of behavioral change that integrate biological, psychological, and social perspectives to explain and predict the acquisition and maintenance of HIV-related behaviors among vulnerable individuals and understudied groups domestically and internationally; support theory-building studies developed in the context of HIV prevention research, including studies that adopt a developmental and life-course perspective. • Support research to better monitor the epidemic and risk behaviors to identify emerging needs for basic behavioral and intervention research. <p>Consequences</p> <ul style="list-style-type: none"> • Support research on the decision-making processes and behaviors of health care workers regarding the offering of HIV counseling, testing, and other prevention services, as well as the prescription of HIV disease treatments. • Conduct research on children affected by HIV, including early identification and assessment. • Identify the neurobiological, behavioral, cognitive, social, and economic consequences of HIV disease for HIV-seropositive individuals (including children), their support systems (e.g., partners, family members, and other caregivers), health care systems, and communities.

- Support research on the economic and social implications for retired and older individuals who provide support and care to younger family members or friends with HIV/AIDS and their dependents.
- Support behavioral research to study end-of-life transition strategies for patients and their caregivers.
- Support interdisciplinary research, involving behavioral and biomedical scientists, to determine whether a bidirectional relationship between stress, depression, immune system functioning, and HIV infection exists and, if so, to examine the psychosocial and physiological factors affecting that relationship.
- Support studies on animal models of behavior and behavioral change relevant to HIV infection and prevention; in particular, conduct behavioral neuroscience and neuropsychological research to determine the brain/behavior changes associated with exposure to HIV, the effects of HIV exposure upon social behaviors (e.g., mother–infant attachment, peer interactions), and behavioral changes in relation to comorbidities of HIV and substance use and addiction.

Prevention

- Study the acquisition and maintenance of HIV-related risk and protective behaviors associated with HIV transmission or progression in specific social and cultural contexts, such as the sexual dyad, peer groups, social and substance-using networks, families, and communities; study how HIV risk might change over time as a function of developmental and life-course events, such as adolescence, childbearing, marriage, divorce and separation, and aging.
- Conduct research on decision-making processes that relate to sexual and drug-related risk taking across the life course (e.g., individual and dyadic decision processes concerning whether and under what circumstances to have sexual intercourse; risk assessment of self and partner; the weighing of pregnancy prevention, HIV prevention, and relationship goals in choosing to use a condom and/or other method) and decision processes related to sharing needles or other drug paraphernalia and having sex with someone who may be infected.
- Support multidisciplinary research that investigates the biobehavioral and sociobehavioral determinants and mechanisms of sexuality, including processes of sexual and gender identity formation.

- Conduct research on partner selection and relationship dynamics, including studies of how partner choice, partner formation, relationship development, and partner stability change over the life course and affect health-related behavior; studies should examine psychological, cultural, and social factors that influence these phenomena.
- Support multidisciplinary research that investigates biobehavioral and sociobehavioral determinants of injection drug use and the transition from noninjection to injection drug use as they relate to HIV transmission; such research may also include studies that investigate the relationship between any drug use and sexual risk behaviors.
- Conduct research on individual social and cultural differences in human sexuality that have an impact on the sexual transmission of HIV; such research may include studies that examine how sexual behavior is affected by substance use and abuse, sexual abuse or coercion, developmental processes, and the formation and dissolution of intimate relationships.
- Study the social, structural, cultural, and demographic factors—such as socioeconomic status, marital status, ethnicity, sexual identification, age, and gender—that influence HIV-related behavior across the life course and in diverse geographic regions, affect access and delivery of care (including cost-effectiveness and cost-utility of behavioral change interventions), and influence the implementation of intervention strategies.
- Support research to understand how and whether communities engage in HIV preventive interventions; determine how to better ensure the use of prevention research by communities, public health entities, and policy planners in the United States and abroad.
- Conduct research that identifies the social and behavioral factors affecting recruitment, retention, and adherence to prevention and treatment interventions, including clinical trials of HIV-related vaccines, microbicides, and therapeutics.
- Support behavioral and social research on the acceptability and use of biomedical HIV prevention methods (e.g., condoms, microbicides, and vaccines).
- Support basic and preintervention research on behavior modification and maintenance of new behavioral patterns for developing prevention and intervention strategies.

OBJECTIVE:

Support research for the development, evaluation, diffusion, and adoption of strategies to increase early identification, to improve treatment adherence, and to prevent or minimize the negative physical, psychological, cognitive, and social consequences of HIV, including stigmatization of persons with or at risk for HIV infection. Support research strategies for promoting effective health care utilization among all persons with HIV infection and for promoting modifications in the health care delivery system to develop more effective, socially appropriate, and culturally sensitive methods to better serve treatment needs of infected populations domestically and internationally.

STRATEGIES:

Treatment and Care

- Develop and test interventions to modify the practice behaviors of health care providers to improve the quality of screening, counseling, and treatment services for HIV-positive persons and persons at risk for HIV infection.
- Support research on adherence to treatment regimens, including communication techniques to improve shared decision making between health care providers and HIV-infected individuals, on issues such as how and when to initiate therapy, and behavioral strategies to manage symptoms secondary to treatment protocols.
- Promote research to identify and remove barriers to effective health care utilization among persons with or at risk of HIV infection, including access, engagement, followup, and adherence to health and social services across the care continuum (e.g., early identification of HIV infection, testing and counseling, health care-seeking behavior, adherence, case management, and home/hospice care) and across the life course (i.e., from childhood to old age).
- Develop and test interventions to increase recruitment, adherence, and retention in HIV/AIDS clinical trials and care by HIV-infected persons from all vulnerable populations, with special attention to developmental and life-course issues.
- Support research on the decision-making processes of health care workers in screening and identifying HIV cases, especially cases of early and acute infection.

- Support health services research and evaluation research to determine the impact of changes in the health care delivery system on HIV/AIDS care.
- Support research to foster more effective participation in treatment planning, decision making, and formulating advanced directives by patients and families.

Biopsychosocial Consequences

- Develop and evaluate interventions to prevent the adverse psychological and social consequences of HIV infection and to assist HIV-affected populations to cope with HIV infections, maintain quality of life, and avoid engaging in HIV-related risk behaviors.
- Test interventions to address the neuropsychological, neurodevelopmental, and psychiatric sequelae of HIV infection.
- Develop and evaluate interventions to minimize the impact of stigmatization on HIV-infected persons, including decisions regarding treatment and quality of life.
- Test interventions designed to support formal and informal caregivers and family members of HIV-infected persons in order to prevent, for example, depression and burnout.
- Support research to enhance the quality of life and minimize the impact of pain, fatigue, physical symptoms, and treatment side effects and to integrate effective palliative care throughout the course of treatment for all people living with HIV and AIDS.

	<p>OBJECTIVE:</p> <p>Support research to advance innovative quantitative and qualitative methodologies to enhance behavioral and social science on HIV prevention and care, and to address pressing ethical issues in the conduct of such research.</p>
<p>STRATEGIES:</p>	<p>Measurement</p> <ul style="list-style-type: none"> • Develop improved methodologies—including methods for obtaining and validating self-report data, culturally appropriate standardization of measurement tools for surveys, and the measurement of change over time—based on an assessment of the current status of qualitative and quantitative methodologies for studying behavioral and social factors associated with HIV and AIDS. • Develop and strengthen culturally, linguistically, and age-sensitive and age-appropriate research instruments for subpopulations (e.g., HIV-infected children, the elderly, and prisoners). • Develop and refine techniques for measuring social networks associated with HIV transmission. • Support research to determine under what circumstances each of the following outcome measures—alone or in combination—is appropriate to use: self-report measures, HIV infection, and other disease outcomes such as other STDs and blood-borne diseases. • Develop improved qualitative approaches to theory building and to measurement of HIV-related behaviors, behavioral change, and factors that influence behavior and behavioral change. • Develop improved triangulated approaches to formulate, integrate, and analyze theories from qualitative and quantitative observations. • Support research to determine how self-reported outcome measures are affected by “response shift,” including the effects of disease progression and treatment on the criteria individuals use to appraise their quality of life, and the impact of interventions on participants’ standards for judging their degree of risk, level of skills, and adequacy of support and care. • Develop and refine outcome measures and indicators appropriate for the evaluation of social policy and the societal impact of HIV prevention interventions.

- Develop and refine research techniques for measuring responses by organizations to HIV and for characterizing organizations working in the HIV field.

Modeling

- Develop and refine mathematical models for linking behavioral change interventions with a reduction in HIV transmission at different levels of seroprevalence.
- Improve methods for forecasting and modeling the AIDS caseload, health care needs, and health care utilization under different treatment and survival scenarios and for forecasting and modeling prevention services needs.

Design and Statistical Analysis

- Develop improved sampling strategies for subpopulations (e.g., children, drug users, the elderly, and gay men of color).
- Develop improved and innovative methods and techniques for conducting and analyzing longitudinal studies of HIV-vulnerable and -infected populations, including improved followup methodologies, methods to increase followup rates, and methods for dealing with subject attrition, missing data, and non-normal distributions.
- Foster the development and dissemination of design alternatives to the randomized controlled trial that permit cost-effective evaluation of intervention strategies at the individual, group, and community levels.

Ethics and Other Issues

- Evaluate the effects of legal and ethical constraints on methods of HIV research and service delivery, particularly among adolescents, children, psychiatric populations, prisoners, immigrants, and other vulnerable or special populations.
- Develop and refine research techniques to advance multisite, intercultural, and international studies.
- Encourage secondary data analysis; develop approaches to protect and document confidentiality.
- Develop and evaluate mechanisms for dissemination of behavioral research findings to the HIV/AIDS research and service communities.

APPENDIX A:

NIH Institutes and Centers

NIH INSTITUTES AND CENTERS

NCI	National Cancer Institute
NEI	National Eye Institute
NHLBI	National Heart, Lung, and Blood Institute
NHGRI	National Human Genome Research Institute
NIA	National Institute on Aging
NIAAA	National Institute on Alcohol Abuse and Alcoholism
NIAID	National Institute of Allergy and Infectious Diseases
NIAMS	National Institute of Arthritis and Musculoskeletal and Skin Diseases
NICHD	National Institute of Child Health and Human Development
NIDCD	National Institute on Deafness and Other Communication Disorders
NIDCR	National Institute of Dental and Craniofacial Research
NIDDK	National Institute of Diabetes and Digestive and Kidney Diseases
NINDS	National Institute of Neurological Disorders and Stroke
NIDA	National Institute on Drug Abuse
NIEHS	National Institute of Environmental Health Sciences
NIGMS	National Institute of General Medical Sciences
NIMH	National Institute of Mental Health
NINR	National Institute of Nursing Research
NLM	National Library of Medicine
CC	Warren Grant Magnuson Clinical Center
CIT	Center for Information Technology
NCCAM	National Center for Complementary and Alternative Medicine
NCRR	National Center for Research Resources
FIC	Fogarty International Center
CSR	Center for Scientific Review
NCMHD	National Center on Minority Health and Health Disparities
NIBIB	National Institute of Biomedical Imaging and Bioengineering

APPENDIX B:

FY 2003 OAR

Planning Group for
Behavioral and Social Science

FY 2003 BEHAVIORAL AND SOCIAL SCIENCE PLANNING GROUP

Non-NIH Participants

Claire E. Sterk, Ph.D., Co-Chair
Associate Professor and Director
Women's and Children's Center
Emory University School of Public Health

Robert E. Booth, Ph.D.
Professor
Department of Psychiatry
Division of Substance Dependency
University of Colorado Health Sciences Center
School of Medicine

Alex Carballo-Diequez, Ph.D.
Associate Professor/Research Scientist
HIV Center for Clinical and Behavioral Studies
New York State Psychiatric Institute
Columbia University

Sherry Deren, Ph.D.
Director and Principal Investigator
Center for Drug Use and HIV Research
Institute for AIDS Research
National Development and Research Institutes

Susan Folkman, Ph.D.
Professor
Department of Medicine
Center for AIDS Prevention Studies
University of California, San Francisco

Marguerita Annette Lightfoot, Ph.D.
Education, Counseling Psychology
Department of Psychiatry
Center for Community Health
Center for HIV
University of California, Los Angeles

Kathleen J. Sikkema, Ph.D.
Director
HIV Prevention and Mental Health Research
Yale University

Merrill Singer, Ph.D.
Chief of Research
Hispanic Health Council

NIH Participants

Judith Auerbach, Ph.D., Co-Chair
Prevention Science Coordinator
Behavioral and Social Science Research
Coordinator
Office of AIDS Research, NIH

Kendall J. Bryant, Ph.D.
Coordinator
AIDS Behavioral Research
Division of Clinical and Prevention Research
National Institute on Alcohol Abuse and
Alcoholism, NIH

Virginia S. Cain, Ph.D.
Special Assistant to the Director
Office of Behavioral and Social Sciences
Research, NIH

Carol Jenkins, Ph.D.
Senior Scientist
Social and Behavioral HIV Prevention Research
Division of AIDS
National Institute of Allergy and Infectious
Diseases, NIH

Elizabeth Y. Lambert, M.Sc.

Health Statistician

Center on AIDS and Other Medical

Consequences of Drug Abuse

National Institute on Drug Abuse, NIH

Susan Newcomer, Ph.D.

Statistician

Demographic and Behavioral Sciences Branch

Center for Population Research

National Institute of Child Health and Human

Development, NIH

Willo Pequegnat, Ph.D.

Associate Director for Prevention and

Translation Research

Division of Mental Disorders, Behavioral

Research, and AIDS

National Institute of Mental Health, NIH

APPENDIX C:

List of Acronyms

LIST OF ACRONYMS

ART	antiretroviral therapy
ACTIS	AIDS Clinical Trials Information Service
AIDS	acquired immunodeficiency syndrome
AITRP	AIDS International Training and Research Program, FIC
ATI	Analytic Treatment Interruption
ATIS	HIV/AIDS Treatment Information Service
AVEG/HVTN	AIDS Vaccine Evaluation Group/HIV Vaccine Trials Network
BSL	biosafety level
B/START	Behavioral Science Track Award for Rapid Transition
CAB	community advisory board
CBO	community-based organizations
CDC	Centers for Disease Control and Prevention
CFAR	Centers for AIDS Research
CIPRA	Comprehensive International Programs in Research on AIDS
CMV	cytomegalovirus
CNS	central nervous system
CSF	cerebrospinal fluid
CTL	cytotoxic T lymphocytes
DC	dendritic cell
DHHS	Department of Health and Human Services
DNA	deoxyribonucleic acid
DOT	directly observed therapy
EBV	Epstein-Barr virus
FDA	Food and Drug Administration
FIRCA	Fogarty International Research Collaboration Award, FIC
GCP	Good Clinical Practices
GCRC	General Clinical Research Center
GI	gastrointestinal

GLP/GMP	good laboratory practices/good manufacturing production
HAART	highly active antiretroviral therapy
HBCU	Historically Black Colleges and Universities
HBV	hepatitis B virus
HCFA	Health Care Financing Administration
HCV	hepatitis C virus
HERS	HIV Epidemiology Research Study
HHV	human herpes virus
HIV	human immunodeficiency virus
HPTN	HIV Prevention Trial Network
HPV	human papillomavirus
HRSA	Health Resources and Services Administration
HVTN	HIV Vaccine Trials Network
IC	Institute and Center
ICC	invasive cervical cancer
IDU	injecting drug user
IHS	Indian Health Service
IUD	intrauterine device
JCV	JC virus
KS	Kaposi's sarcoma
KSHV	Kaposi's sarcoma herpes virus
LRP	Loan Repayment Program, NIH
MAC	<i>Mycobacterium avium</i> complex
MCT	mother-to-child transmission
MDR-TB	multiple drug-resistant tuberculosis
MHC	major histocompatibility complex
MSM	men who have sex with men
N9	nonoxynol
NAFEO	National Association for Equal Opportunity in Higher Education
NGO	nongovernment organizations

NHL	non-Hodgkin's lymphoma
NHP	non-human primate
NIH	National Institutes of Health
NRTIs	nucleoside reverse transcriptase inhibitors
OAR	Office of AIDS Research, NIH
OARAC	Office of AIDS Research Advisory Council
OD	Office of the Director, NIH
OI	opportunistic infection
PHS	Public Health Service
PML	progressive multifocal leukoencephalopathy
RCMI	Research Center in Minority Institution
RCT	randomized clinical trials
RFIP	Research Facilities Infrastructure Program
RNA	ribonucleic acid
RPRC	Regional Primate Research Center
SAMHSA	Substance Abuse and Mental Health Services Administration
SCID	severe combined immunodeficiency
SHIV	chimeric simian/human immunodeficiency virus
SIT	scheduled intermittent therapy
SIV	simian immunodeficiency virus
SPF	specific pathogen-free
STD	sexually transmitted disease
STI	Structured Treatment Interruption
TB	tuberculosis
TI	treatment interruption
UNAIDS	United Nations Joint Programme on AIDS
VEE	Venezuelan equine encephalitis virus
VRC	Vaccine Research Center
WHO	World Health Organization
WIHS	Women's Interagency HIV Study

Office of AIDS Research, National Institutes of Health
Building 2, Room 4E30 (MSC 0255)
Two Center Drive, Bethesda, Maryland 20892
Tel: 301-402-3555, Fax: 301-496-4843

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